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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,168	04/27/2001	Thomas Schilling	P 280255 RRD10403PUS-3MK	8590

7590 04/11/2003

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EXAMINER

GARTENBERG, EHUD

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 04/11/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,168

Applicant(s)

SCHILLING ET AL.

Examiner

Ehud Gartenberg

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on papers filed through 3/17/2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

NOTE: Because Applicant has not filed translations of some foreign documents, in the following rejections, the *loc. cit.* in WO96/27766 will actually point to US Brehm 6,058,710, and those in DE 28 38 258 will actually point to US Caruel 4,246,758.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over anticipated by WO 96/27766. This rejection is based on the fact that Fig. 1 in WO'766 and Fig. 1 in the present application are identical, and at least all the features claimed in independent claim 1 are taught in Fig. 1 of WO'766, including the single row of ports 9 on the inner wall 11 and on the outer wall 10 respectively. Applicant is suggested to comment on whether at the time of the filing of the present application, the apparatus disclosed in WO'766 was on sale, and if it was, what were the relevant limitations that were different from those claimed in the present application. Claim 5 is rejected in view of element 9 in Brehm, because a round drill drilling on a surface perpendicular to its axis drills a circular hole. Claim 6 is rejected in view of element 14 in Brehm, because a round drill drilling on a surface that

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is not perpendicular to its axis drills a non-circular hole. Therefore, Brehm anticipates both circular and non-circular holes. Claim 7 is rejected in view of elements 9 in Brehm. Claim 10 reads on the limitation of the lower port 9 in Fig. 1, because the lower arrow 9 is inside the angle formed by the extension of upper arrow 9 extending to the center of the hole of arrow 9 and the line extending from said center to the center of the exit plane of burner 4. Claim 11 is rejected as a matter of obvious design optimization of the size of hole h as a function of the requested air mass flow rate and the depth of penetration of said air into the combustion zone.

Regarding the comments filed 3/17/200³~~4~~ about the claimed limitations "with an alignment of the ports of the second arrangement being either on-center or off-center with interspaces of the first row of ports of the first arrangement", note that the "on-center" together with the "or off-center" limitation covers in the alternative all possible locations (there is no a third possible location), and therefore, even without knowing the exact location of the Brehm holes, they inherently read on the locations as presently claimed.

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO'766 for reasons discussed above, and further in view of DE '258 which teaches that it was known in the art at the time of the claimed invention to make plunged holes with small rims in flame-tube walls. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to make the WO'766 holes as plunged holes as taught by DE'258, as a matter of manufacturing convenience.

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Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO'766 for reasons discussed above, and further in view of DE 197 20 402 which teaches that it was known in the art at the time of the claimed invention to make tubular-chute holes in flame-tube walls. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to make the WO'766 holes as tubular-chute holes as taught by DE'402, as a matter of manufacturing convenience.

Response to Arguments

4. The arguments filed 3/17/2003 have been carefully considered, however they were not persuasive as explained in the body of the rejection, item 2 above.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

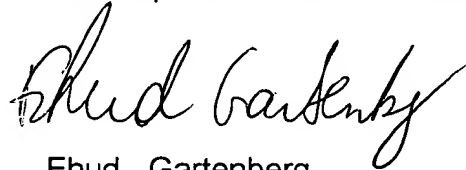
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ehud Gartenberg whose telephone number is 703/308-2634. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S Thorpe can be reached on 703/308-0102. The fax phone numbers for the organization where this application or proceeding is assigned are 703/872-9302 for regular communications and 703/872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/308-0861.



Ehud Gartenberg
Primary Examiner
Art Unit 3746

April 10, 2003